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ABSTRACT

Since 1986, the Center for Population Options (CPO)/Support Center for School-Based Clinics (SBCs) has conducted an annual survey. Over time the SBC has become a prototype for other adolescent health service models. Perhaps the oldest is the school-linked clinic (SLC), a free-standing adolescent health clinic. Located away from the school campus, the SLC has the capability to serve youth who are not in school as well as youth from more than one school, while emphasizing its linkages with the schools. In order to identify SLCs, and in response to the suggestion that the SBCs in some states were underrepresented on the previous year's list, a survey of state departments of health was conducted. The SBC/SLC survey was then sent to 239 clinics, including 224 SBCs and 15 SLCs in February 1991. Results were analyzed for the following categories: schools served, sponsorship and funding, community involvement, clinic operations, clinic use, and staffing patterns. The results indicated that both SBCs and SLCs provided services to a wide range of grade levels and that nearly a quarter of SBCs provided services to students from more than one school. Results from the survey also indicated SLCs seem to have fewer restrictions compared to SBCs with regard to provision of services. (A special section is included on Michigan's teenage health centers.) (LLL)

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SCHOOL-BASED AND SCHOOL-LINKED CLINICS

Update 1991

by Cynthia Waszak, Ph.D.
and
Shara Neidell

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CPO AND THE SUPPORT CENTER

The Support Center for School-Based Clinics, a project of the Center for Population Options (CPO), is a national resource for practitioners serving young people with comprehensive health care in a school-related setting. Begun in 1985, the Support Center works to facilitate communication among SBC practitioners, policy makers and advocates, assists in program development, consults on program operations, cooperates in the evaluation of the SBC model, assesses public policy initiatives and projects trends for the field. The Support Center provides technical assistance, training, national conferences, publications and *Clinic News,* a newsletter on program and policy developments.

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TABLE OF CONTENTS

Introduction 3

The Survey 4

Survey Results 6

Discussion 22

Concluding Comments 24

Michigan's Experience 25

INTRODUCTION

Since 1986, the Center for Population Options (CPO)/Support Center for School-Based Clinics has conducted an annual survey to collect and provide information on school-based clinics (SBCs). This information is presented in each year's **Update** report which is used by practitioners, administrators, policy makers and a host of other people who are interested in this model of health care delivery. The Support Center is pleased to play an ongoing role in shedding some light on the achievements and potential of these clinics.

Over time the SBC has become a prototype for other adolescent health service models. Perhaps the oldest is the school-linked clinic (SLC), a free-standing adolescent health clinic. Located away from the school campus, the SLC has the capability to serve youth who are not in school *and* youth from more than one school, while emphasizing its linkages with the schools. As communities continue to come to grips with adolescents' need for health, counseling and other services, other models no doubt will emerge.

This year, for the first time, the Support Center included SLCs in the survey. There findings are presented throughout this report, **Update 1991**.

Both the SBC and SLC continue to fill adolescents' need for accessible and specialized care. Because of their unique track records, both have distinct opportunities to offer leadership to communities seeking ways to promote health and prevent disease among adolescents.

Another feature of this year's **Update** is a special section on Michigan's teen health centers. Located within schools and off campus, these health facilities have been supported by the state of Michigan since 1987. This spotlight on Michigan programs coincided with the Support Center's 1991 SBC conference "**HEALTH PROMOTION : Making a Difference in the 90's,**" held in Dearborn, Michigan on October 15-17, 1991 and which focused on Michigan's exemplary programs.

We hope that advocates, policy makers and practitioners with an interest in SBCs and SLCs will find **Update 1991** helpful.

THE SURVEY

The sample. The Support Center developed a roster of all known SBCs and SLCs from a variety of sources. As a base, a list of SBCs known to the Support Center, which is continuously updated as new clinics are identified, was used. In order to identify SLCs, and in response to the suggestion that the SBCs in some states were under-represented on our list last year, a survey of state departments of health was conducted. The SBC/SLC survey was then sent to 327 clinics on the expanded list that fit the Support Center's working definition of a school-based or school-linked clinic and were open during the 1989-90 school year (the survey year for which data was requested). For this analysis, school-based clinics were defined as clinics providing comprehensive health care and located on school grounds; school-linked clinics served primarily school-aged populations with comprehensive health services, but were located off school campuses. The overall response rate of the 327 clinics contacted was 73 percent (239 clinics): 224 of 306 SBCs (73 percent), and 15 of 21 SLCs (71 percent).

Clinics in the sample were located in 33 states and in Puerto Rico. SBCs responding had been in operation an average of 53 months and SLCs responding had been in operation for an average of 33 months.

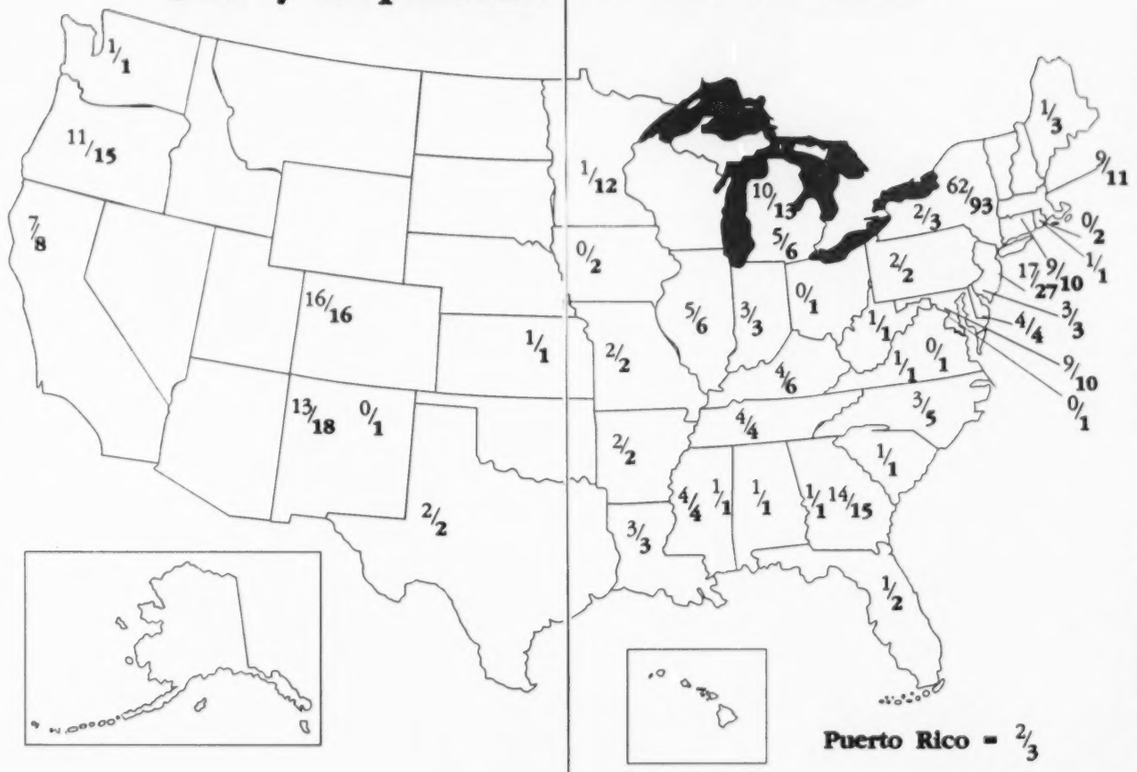
The questionnaire. The 13-page questionnaire was reviewed by several school-based clinic practitioners and was pre-tested at two sites. It included questions concerning school(s) served, community involvement, sponsorship, funding and clinic operations (services offered, staffing patterns and consent procedures). Most questions were structured as fill-in-the-blank or as multiple choice questions.

The survey procedures. The survey was sent out the first week of February 1991 to all known clinics. Reminder notices were sent out the first week in April to clinics that had not responded. Calls were made to the remaining non-responders during the month of May. Second surveys were sent out to clinic staff who had misplaced or never received the first copy.

As an incentive to complete the survey, vouchers for $25 off the registration cost for the annual SBC conference were promised to all clinics returning a survey.

SBC/SLC MAP

Survey Respondents vs. Known Clinics



(blue)
x = # of SBCs responding to survey
y = # of SBCs (known to CPO) operating in state

(black)
x = # of SLCs responding to survey
y = # of SLCs (known to CPO) operating in state

The analysis. A descriptive analysis is presented below of the survey data, with individual clinics used as the unit of analysis. In many cases, SBC and SLC data are presented separately and some comparisons are noted between SBCs and SLCs when differences seem significant. Because of the small number of SLCs identified, no attempt was made to perform statistical tests. This preliminary descriptive information can be used as a starting point for future studies to understand the dynamics between clinic location, clinic use and quality of care.

SBCs serving only one school also were analyzed separately according to grade level.* Where large differences on outcome variables of interest were found between grade levels, these trends were noted and percentages were presented separately in tables. Again, however, no significance tests were performed. Further studies may be able to explore their differences in more depth.

Tables of data described in the text are included where indicated. No tables were included when the description in the text was considered sufficient without the table.

It should be noted that these data are generalizable only to those clinics responding to the survey. As with all survey data, respondents with the motivation and resources to complete and return the survey may differ in some ways from those which do not. This should be considered when interpreting the data.

* *Wherever this term is used, it refers to the differences between and among elementary, middle and high school levels.*

SURVEY RESULTS

TABLE 1. Overview of School-Based Clinics

	(Total N = 224)
Mean number of schools clinics serves (N=203)	1.9
Mean total enrollment of schools (N=202)	1441
Percent of males enrollment (N=137)	47
Percent of school by ethnicity(N=186)	
White	29
Black	42
Hispanic	24
Asian	2
Other	3
Number of clinics by level of school(s) served (N=219)	
Senior high school	112
Junior high school	27
Middle school	27
Elementary school	44
Senior/junior high or middle school	15
Elementary/junior high or middle school	3
K through 12	10
Vocational/technical school	5
Other	14

Schools Served

School-based clinics. Overall, the mean number of schools served by a school-based clinic was 1.9, but the median and mode were both one. One hundred fifty-two of the 203 SBCs responding to that question indicated that they served one school only (75 percent). Of these, 77 served senior high schools (51 percent), 19 served junior high/middle schools (13 percent) and 28 served elementary schools (19 percent). Sixteen (12 percent) served schools which were some combination of senior, junior high/middle and/or elementary schools; the remaining 12 were vocational/technical schools or unspecified in an "other" category. It is these 152 schools which are included in the grade level analysis of school-based clinics.

Forty-nine clinics indicated that they served more than one school. Fourteen of these clinics served several schools, but only one grade level, while the remaining clinics served one or more schools of varying grade levels.

The average enrollment of schools with SBCs was 1,441. An average of 47 percent of the student population was male. The average percentages of students from each ethnic/race category were 42 percent black, 29 percent white, 24 percent Hispanic, 2 percent Asian and 3 percent other (Table 1).

School-linked clinics. SLCs typically served more than one school and more than one grade level (Table 2). Among the respondents in this year's survey, the average number of schools served was 6.5 with an average total enrollment of 5,017. SLCs primarily served senior high and junior high/middle schools, although a few served elementary students. In about half of the SLCs, at least one of the feeder schools provided space and staff. In about a third of the SLCs, referrals from the feeder school were necessary before a student could be seen. In only about 20 percent of the SLCs was there a written agreement in place between the school(s) and the clinic.

Sponsorship and Funding

Sponsoring agencies are organizations, usually at a local level, that have administrative and fiscal responsibility for the clinic. This typically involves fundraising (initial and continuing), disbursing funds, hiring and supervising personnel and making decisions about clinic policy and operations. Results from this survey indicate much diversity among SBCs with regard to the types of agencies that sponsored them. During the 1989-90 school year, 28 percent of the responding SBCs were sponsored by a community health clinic, 26 percent by a public health department and 24 percent by a hospital or medical school – all health organizations. Only 7 percent of SBCs were sponsored by school systems (Table 3).

Differences in sponsorship by grade level among clinics serving only one school were few. A smaller percentage of pediatric departments sponsored SBCs in a senior high school than in other schools. No elementary SBCs were sponsored by school systems or community-based organizations.

The distribution of types of sponsoring agencies was somewhat different for school-linked clinics: 40 percent were sponsored by a public health department, 20 percent by medical schools or hospitals, 13 percent by community-based organizations and 13 percent by private, non-profit agencies. Only 7 percent were sponsored by the school system.

Less common SLC sponsorship categories included mental health agencies, other private agencies and combinations of the above agencies; 3 percent of SBCs indicated sponsorship by a combination of the public health department and the school system.

Respondents were asked to indicate the amount of actual dollars they received from each funding source listed. (Table 4). Percentages for each funding source are shown in Figure 1 for SBCs and SLCs separately. A separate

TABLE 2. Overview of School-Linked Clinics

	(Total N = 15)
Mean number of schools linked with (N=13)	6.5
Mean written agreements in place (N=11) YES	2
Mean total enrollment of schools (N=8)	5,017
Number of clinics by level of school(s) served(N=13)	
Senior high school	11
Junior high school	10
Middle school	6
Elementary school	3
Senior/junior high or senior/middle school	4
Elementary/junior high or elementary/middle school	2
K though 12	2
Vocational/technical school	4
Other	3
Provide staff in feeder schools (N=14) YES	8
Space allocated in schools (N=14) YES	7
Referrals from linked schools necessary (N=14) YES	5

TABLE 3. Sponsoring Agencies: Percentages of SBCs and SLCs by sponsoring agencies

Type of sponsoring agency	SBC (N=216)	SLC (N=15)
Hospital medical school		
Dept. of adololescent medicine	4%	0%
Family practice	4%	7%
Pediatrics	7%	0%
Combination	2%	0%
Other	7%	13%
Community health clinic	28%	7%
Public health department	26%	40%
Family planning clinic	1%	0%
School system	7%	7%
Community based organization	6%	13%
Non-profit agency	0%	13%
Public health dept. /school ystem	3%	0%
Mental health agency	1%	0%
Other	3%	0%
Total	99%	100%

Note: Where percentages in the tables and charts throughout do not add to 100, it is attributable to rounding.

question was asked about the total budget for each clinic; because a greater number of clinics answered the question on total funding than the questions about individual sources, the mean for this number is different than the total of the means for individual sources.

For SBCs, the largest percentage of funding – 25 percent – was received from state health departments, while 3 percent was received from state human services departments. Private foundations provided 19 percent of the funding dollars for SBCs, followed by 17 percent from Maternal and Child Health (MCH) block grants and 12 percent from city/county governments. Six percent of funding was received from school districts, and only 2 percent of funding came from private insurance reimbursement and patient fees.

State health departments provided 36 percent of the funding for SLCs, while state human services departments provided 17 percent. Fifteen percent came from city/county governments and 7 percent came from MCH block grants. Private foundations provided 3 percent of total funding and patient fees provided 2 percent.

Nineteen percent of SBCs and 46 percent of SLCs charged fees for services, but anecdotal evidence indicates that these fees were generally small, with clinics rarely attempting to collect unpaid fees. Less than 20 percent of clinic users overall were covered by private insurance or HMOs; nearly 40 percent had no coverage at all.

Among SBCs serving only one school, junior high/middle schools were most likely and "other" schools were least likely to charge fees for services. On average, elementary school children were the most likely to have no insurance coverage (54 percent) while those in the "other" category were the least likely (26 percent).

The average budget for SBCs was $102,377 and the average budget for SLCs was $201,762; despite the lower average for SBCs, the range was much larger than was the range for SLCs. Indeed, several SBCs indicated that they received no actual dollars, and thus, functioned entirely on in-kind contributions. The median budget for SBCs was $87,180 and $179,150 for SLCs.

In-kind contributions provided an important source of support for SBCs and SLCs, valued at an average of $37,886 per clinic. Predictably, the types of in-kind contributions differed for SBCs and SLCs. Nearly all SBCs received facilities/space, utilities and maintenance from the schools in which they reside, and nearly half received some in-kind support in equipment and personnel. In-kind transportation services were received by 18 percent of SBCs. While about half of SLCs also received in-kind support for equipment and personnel, only about a third received space and maintenance in-kind contributions. In-kind transportation services were provided for 7 percent of SLCs. Interestingly, these differences in types of contributions did not result in large differences in the mean dollar value of in-kind contributions: $38,404 for SBCs and $32,338 for SLCs

There was little variation in in-kind support between grade levels with the exception of personnel. Nearly 70 percent of junior high/ middle schools compared to about 40 percent in senior high and elementary schools received in-kind support for personnel.

Community Involvement

Advisory Board. Sixty-six percent of SBCs and 87 percent of SLCs had an advisory board during the 1989-90 school year.

Over half of these boards met four or more times a year. Their membership typically included parents, school staff, students, youth service agency (YSA) representatives and

TABLE 4. Funding Source: SBC and SLC operating budgets by funding source expressed in mean dollars

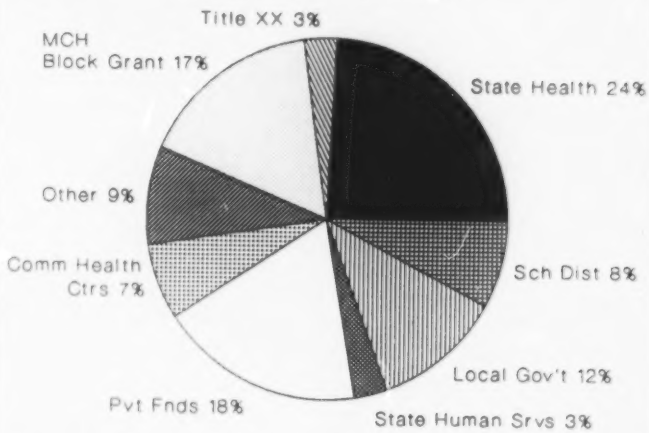
Funding Source	Mean Dollars			
	SBC (N=174)*	N	SLC (N=10)*	N
MCH block grant	36,640	76	17,770	5
EPSDT	4,783	58	4,668	7
Medicaid	4,999	75	9,833	5
Title X	211	45	6,667	6
Title XX	7,459	46	0	6
School district	12,692	61	0	6
Community health centers	15,138	53	1,833	6
State health agency	53,639	96	95,458	7
State human services agency	7,471	174	44,793	10
City/county government	24,969	67	38,731	7
Private fundations	41,387	70	9,143	7
Private insurance	2,169	61	1,447	7
Patient fees	1,437	57	4,629	7
Other	3,390	174	30,214	10
Total	102,377	174	201,762	10
Range	(0-973,000)		(88,850-543,170)	

* 174 SBC respondents and 10 SLC respondents gave a total dollar amount. The number responding to each particular source varied.

Funding Sources

Figure 1a:

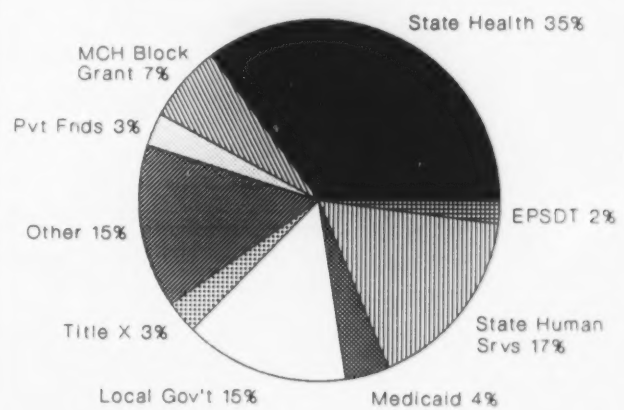
% of SBC operating budget by source



Other includes: EPSDT; Medicaid; Title X; private insurance and patient fees.

Figure 1b:

% of SLC operating budget by source



Other includes: community health centers, private insurance, and patient fees.

community representatives who were neither parents nor school staff. Funders, elected officials and corporate supporters were also included, but less frequently. The membership of SLC advisory boards tended to include more categories of non-school, non-clinic related staff; greater percentages of SLCs compared to SBCs included YSA representatives and community residents.

Nearly all advisory boards gave advice on ways to improve the clinic program. Over half of the advisory boards for SBCs reviewed policy (68 percent) and represented the clinic in public or to the media (52 percent); over half the advisory boards for SLCs reviewed policy (92 percent), developed policy (69 percent) and represented the clinic (62 percent). Fundraising was a minor role for advisory boards.

Among SBCs serving only one school, a greater percentage of senior high schools (82 percent) compared to junior high/middle schools (32 percent) or elementary schools (39 percent) had advisory boards. Grade level comparisons among SBCs serving only one school indicated many similarities between the SBCs with the following exceptions. Advisory boards for elementary schools met less often than those in senior high and junior high/middle schools. As one might expect, elementary school advisory boards were less likely to have – in fact, never had – student representation on their board. They were more likely than other grade levels to have community representatives, funders, elected officials and corporate leaders on their boards. Fundraising was never undertaken by elementary advisory boards. They were also less likely to develop policy, but more likely to review policy than advisory boards at other grade levels.

Other Agencies. Forty-seven percent of SBCs and 53 percent of SLCs responding to the survey indicated that there was an organized advocacy group other than the advisory board that dealt with political issues related to adolescent health. The majority of these groups included clinic staff members.

SBCs and SLCs often had formal or informal agreements to cooperate with outside community agencies. Over half of SBCs had such arrangements with the health department, department of education and/or a mental health agency. For SLCs, this list was extended to social services departments and juvenile service agencies. On average, SLCs had these arrangements with 3.9 agencies and SBCs with 3.4 agencies. This differed little by grade level among SBCs serving one school.

Clinic Operations

Location. A defining characteristic of SBCs and SLCs is location. Ninety percent of SBCs were located inside the main school building, while the remaining 10 percent were located in a separate building on school grounds. A grade level comparison of SBCs serving one school indicated that location varied by student age, with elementary students always having access to the clinic inside the main school building.

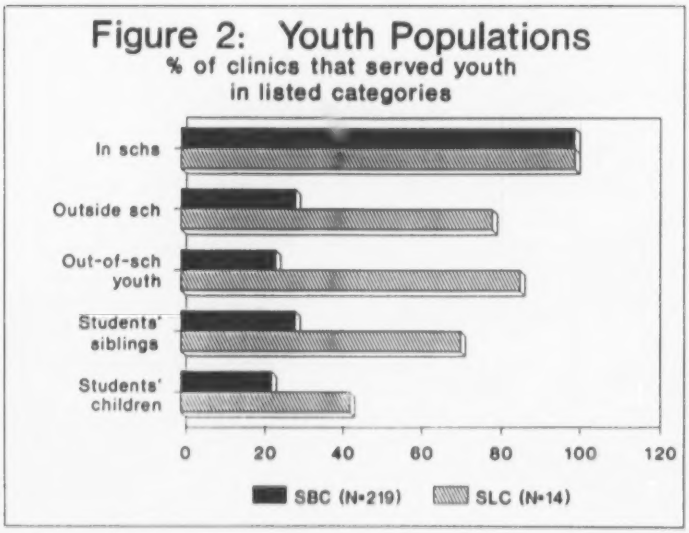
While all SLCs are located off school grounds, sixty-seven percent of SLCs were located within walking distance of one or more feeder schools.

Hours. Results of this survey clearly demonstrate that SLCs have longer hours of operation than do SBCs (Table 5). Eighty percent of SLCs were open 32 or more hours per week compared to 65 percent for SBCs. The mean number of days SLCs were open a week was 4.9 compared to 4.6 for SBCs. Greater percentages of SLCs than SBCs were open after school, evenings, on weekends, during the summer, on school holidays and on teacher workdays. A greater percentage of SBCs, however, was open before school.

TABLE 5. Clinic Operating Hours: Operating times by percentages of SBCs and SLCs

	SBC	SLC
Number of hours per week:	(N = 212)	(N = 15)
1 to 16	14	7
17 to 32	21	13
More than 32	64	80
Number of days open per week:	(N = 205)	(N = 15)
1 to 4	15	7
5	83	87
6 to 7	2	7
Open during the following time periods:	(N = 216)	(N = 15)
Before school	48	31[e]
After school	65	93
Evenings	9[a]	73
Weekends	2[b]	20
Summer	49[c]	93
School holidays	20[d]	87
Teacher workdays	64[d]	100

a N = 211 for this item
b N = 212 for this item
c N = 213 for this item
d N = 214 for this item
e N = 13 for this item



Grade level comparisons demonstrate that SBCs in senior high schools were open more hours during the week than were junior high/middle or elementary school clinics. Before school hours, coverage by the clinic was less common among elementary school clinics (26 percent) than among senior high (53 percent) or junior high/middle school (53 percent) clinics. School holiday coverage was rare or nonexistent for junior high/middle school and elementary school clinics, but available in 22 percent of senior high clinics. Elementary schools, however, were more likely to provide services on teacher workdays than were other types of schools.

Enrollment eligibility. A greater percentage of SLCs compared to SBCs enrolled students that did not attend base or feeder schools in their program (Figure 2). Eighty-six percent of SLCs compared to 29 percent of SBCs allowed out-of-school youth to enroll; 71 percent of SLCs compared to 29 percent of SBCs allowed siblings of students to enroll, and 43 percent of SLCs compared to 23 percent of SBCs allowed children of students to enroll.

Among SBCs serving one school, greater percentages of senior high (16 percent) and junior high/middle school clinics (11 percent) served out-of-school youth compared to elementary clinics (4 percent); 42 percent of elementary schools compared to 16 percent of senior high and 16 percent of junior high/middle schools served siblings of students.

Services. During the 1989-90 school year, SBCs and SLCs provided a wide array of services, including medical, counseling and family planning services.

Over 90 percent of SBCs offered the following medical services: assessment and referrals to community health care providers and private local physicians; diagnosis and treatment of minor injuries; general primary health care; and routine or sports physicals (Table 6). Over half did routine lab tests, prescribed and dispensed medication, managed chronic illnesses, gave immunizations, referred pregnant clients for prenatal care, diagnosed and treated sexually transmitted diseases (STDs) and did gynecological examinations. Early periodic screening, diagnosis and treatment (EPSDT), on-site prenatal care, pediatric care for infants of students and dental care were provided in a least 25 percent of the SBCs responding to the survey. Dental services were provided at a larger percentage of SBCs in elementary schools than in other types of schools.

This mix of medical services generally was provided in similar proportions in SLCs with a few exceptions. Medical services related to reproductive health – pregnancy tests, prenatal

care, diagnosis and treatment of STDs, gynecological exams and referral for prenatal care – were more likely to be provided by SLCs compared to SBCs (Table 7). On the other hand, a smaller percentage of SLCs compared to SBCs provided chronic illness management and dental services.

SBCs and SLCs addressed psycho-social needs primarily through counseling and education services, such as nutrition education and weight reduction programs, AIDS prevention education in the clinic and classroom, drug and substance abuse programs, sexuality counseling, support groups of various kinds, referrals for counseling, parenting education and mental health counseling, including family counseling with students and their parents (Table 8). The only listed service offered by fewer than half of the SBCs was parenting and childcare classes.

Again, differences can be found between schools at different grade levels. Drug and substance abuse programs, sex education in the classroom, AIDS prevention education in the clinic and the classroom and support groups were offered less often in elementary school clinics than in either senior high or junior high/middle school clinics. HIV testing and counseling were offered less often in junior high/middle schools than in senior high schools, and offered even less often in elementary school clinics.

In virtually every non-classroom counseling area, a larger percentage of SLCs provided services, including: drug and substance abuse programs, family counseling, mental health and psycho-social counseling, job counseling and sexuality counseling.

TABLE 6. Medical Services: Percentages of SBCs and SLCs providing various medical services

Medical services	SBC (N=222)	SLC (N=15)
General primary care	91	87
Routine or sports physicals	91	87
Laboratory tests	87	93
Diangnosis/treatment of minor injuries	92	93
Chronic illness management	78[b]	60
Pregnancy tests	69[a]	87
Prenatal care onsite	24[b]	33
Gynecological exams	56[a]	80
Diagnosis/treatment of STDs	57[a]	87
HIV testing	14[c]	33
Pediatric care of infants of adolescents	19[a]	33
Immunizations	71	86[f]
EPSDT screenings	41[d]	67
Dental services	28	13
Medications prescribed	83[a]	87
Medications dispensed	69	71[f]
Referral for prenatal care	79	87
Assessment/referrals to comm. health care	96[e]	93
Assessment/referral to private local physicians	92	93

a N = 223 for this item
b N = 221 for this item
c N = 220 for this item
d N = 218 for this item
e N = 224 for this item
f N = 14 for this item

TABLE 7. Family Planning Services: Percentages of SBCs and SLCs providing family planning services

Family planning services	SBC (N=223)	SLC (N=15)
Counseling for birth control methods	70	93
Examiniations for birth control methods	40	53
Condoms provided	18	53
Foam provided	16 [a]	40
Prescriptions for birth control pills written	28 [a]	47
Birth control pills dispensed	15 [b]	47
Referrals for contraceptives	68 [a]	80
Follow-up on contraceptive users	64 [a]	67
Refferals for counseling/other family planning services	76	93

a N = 222 for this item
b N = 221 for this item

Family planning services spark the most controversy surrounding SBCs and SLCs. Although 60 percent or more of SBCs provided counseling, referral or follow-up for family planning methods during the 1989-90 school year, only 28 percent wrote prescriptions for birth control pills and fewer than 20 percent dispensed any kind of contraceptive on-site.

As expected, these percentages varied by the grade level of the school served. Very few elementary clinics provided any family planning services, and where they were offered it was in the form of counseling, referrals and follow-up.

Senior high schools were generally slightly more likely to make contraceptives available on-site compared to junior high/middle schools. More school-based clinics in the "other" category – generally those in combination schools which included senior high level students – provided contraceptives on-site than did other clinics.

Greater percentages of SLCs compared to SBCs provided family planning services. About half of the SLCs wrote prescriptions for contraceptives, dispensed birth control pills, and/or made condoms and foam available in the clinic, whereas only 16 to 28 percent of the SBCs provided one or more of these services.

Among the innovative services provided by the clinics were daycare for children of students (6 percent of SBCs and 14 percent of SLCs); employee physicals for school district personnel (6 percent of SBCs and 27 percent of SLCs) and special activities, such as recreation and adventure clubs (35 percent of SBCs and 40 percent of SLCs).

Prearranged sources of care. Nearly 80 percent of SBCs responding to this survey made arrangements for some type of after-hours care. For nearly 40 percent of these clinics, this arrangement included some combination of the following: telephone answering machine or beeper service, hospital emergency room or clinic, community-based clinic or private practitioner. Forty percent of SLCs handled after hours care through telephone answering machine service, 14 percent used hospital facilities and 33 percent used some combination of these.

When analyzed by SBC grade level, 93 percent of elementary school clinics, 83 percent of senior high clinics and 68 percent of junior high/middle school clinics had prearranged sources of care. The mix of sources that was provided did not differ a great deal among grade levels.

Outreach. The types of outreach used most often by SBCs were materials sent home with students (93 percent) and maintaining personal contact with parents (94 percent) (Table 9). They also provided information to outside advocacy groups (70 percent), published newsletters (58 percent) and held open houses for parents (56 percent). SBCs at elementary schools used these types of outreach less often than did senior high and junior high/middle school clinics. The greatest percentages of SLCs sent materials home (87 percent), maintained personal contact with parents (80 percent) and published newsletters (80 percent).

Consent policy. Clinics varied in the types of parental consent required for services (Figures 3a and 3b), and there were virtually no differences between SBCs and SLCs in these policies. The most common parental consent policy (30 percent) was that parents were asked to sign a consent form which listed all services provided by the clinic. A signature indicated that the student was permitted to receive all services listed (blanket consent). Some 21 percent of the clinics required parents to sign a consent form which listed the services provided and gave parents the opportunity to check off the services they did not want their child to receive. A parent's signature meant that the child could receive any services except those checked off (negative check off). Thirteen percent asked parents to sign a consent form listing services provided and gave parents the opportunity to check off services they wished

TABLE 8. Counseling Services: Percentages of SBCs and SLCs providing various counseling services

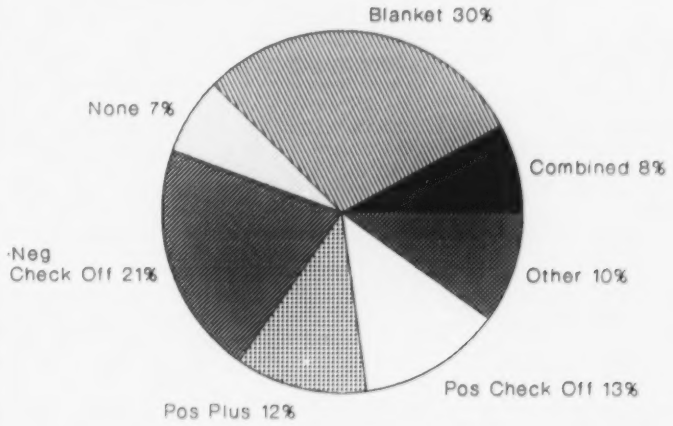
Counseling services	SBC (N=222)	SLC (N=15)
Nutrition education	91 [a]	93
Health education	96	100
Weight reduction programs	67 [b]	67
Drug and substance abuse programs	58 [b]	73
Sex education in the classroom setting	64	73
Parenting education	65 [b]	73
Family counseling w/ student and family	76 [c]	100
Mental health and psycho-social counseling	79	100
Job counseling	79	100
Sexuality counseling	76	87
HIV counseling	61 [b]	67
Parenting/childcare classes	31 [e]	27
AIDS education in clinic	64 [d]	71
AIDS education in classroom	59 [c]	47
Support groups	58 [c]	53
Referrals for counseling	90 [c]	100

a N = 223 for this item
b N = 221 for this item
c N = 220 for this item
d N = 219 for this item
e N = 217 for this item

Parental Consent Requirements

Figure 3a:

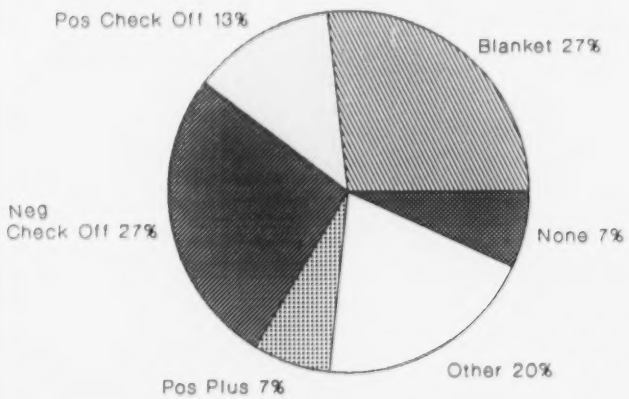
% of SBCs having listed requirements •



(N=216)

Figure 3b:

% SLCs having listed requirements •



(N=15)

KEY

None: No consent required (7)*

Blanket: Parents were asked to sign a consent form which lists all services provided by the clinic. A signature by the parent indicates student can receive all services listed. (29)

Positive Check Off: Parents are asked to sign a consent form which lists the services provided and gives the parents the opportunity to check off or list which services they give permission for the student to receive. A signature by the parent is treated as permission for the student to receive any of the checked or listed services. (13)

Negative Check Off: Parents are asked to sign a consent form which lists the services provided and gives the parents the opportunity to check off or list which services they do not want their child to receive. A student receives any service except those checked or listed. (21)

Positive Plus: Parents are asked to sign a consent form which lists the services provided by the clinic. A signature by the parent is treated as permission for the student to receive any of the listed services. The form also contains a notice that students may receive certain services without parent's consent as authorized by state law (e.g. treatment of STDs). (11)

Comb.: Combination of the above. (8)

Other: None of the above. (10)

* Overall percentages by type of parental consent are indicated in parentheses following each description

their child to receive. A signature by the parent was treated as permission for the student to receive any of the checked services (positive check off). About 12 percent of the clinics provided parents with a consent form similar to the one just described, but augmented with a notice that a student may receive certain services without parental consent, as authorized by state law (positive plus). About 18 percent required a combination of these (combination) or something else (other), such as general medical consent. Overall, 7 percent required no parental consent at all (none). A grade level comparison indicated that all elementary SBCs required some form of parental consent.

Table 10 lists the percentages of SBCs and SLCs that provided various categories of services without parental permission. With the exception of emergency care, greater percentages of SLCs compared to SBCs provided all of these services. Out of the 61 clinics responding that they provided family planning services without parental permission, all but one said that they did so in response to state laws or regulations.

With the exception of emergency care, elementary schools were more likely to require parental consent for any single category of services than were senior high and junior high/middle schools, though the progression from elementary to junior high/middle schools was not straightforward. A slightly smaller percentage of senior high clinics than junior high/middle school clinics provided family planning services or mental health counseling without parental permission.

Clinic Use

An average of 714 students were enrolled in each SBC during the 1989-90 school year – about half the average school enrollment (Table 11). An average of 543 of these students

TABLE 9. Clinic Outreach: Percentages of SBCs and SLCs conducting outreach activities

Clinic Activities	SBC (N=217)	SLC (N=15)
Maintained personal contact w/parents	44	80
Published newsletter or other materials*	58 [a]	80
Held open house for parents	56 [b]	47
Held open house for public/media	27 [c]	53
Sent material home with students	93	80
Provided information to outside advocacy group(s)	69	62

a N = 216 for this item b N = 214 for this item c N = 213 for this item *Posters, fliers, etc.

TABLE 10. Services Provided Without Parental Consent: Percentages of SBCs and SLCs providing indicated services without parental consent

Types of services	SBC (N=216)	SLC (N=14)
Emergency care	68	46[c]
Treatment of emancipated minors	44	79
Family planning services	26	50
Other pregnancy related care	29 [a]	43
Treatment of sexually transmitted diseases	30	71
Mental health counseling	34	50
Rubella/other immunizations	8 [b]	21

a N = 217 for this item b N = 213 for this item c N = 13 for this item

TABLE 11. Summary of SBC Clinic use during the 1989-1990 school year for all grade levels

Mean number of students enrolled in clinics (N=153)		714
(range: 108-3,200)		
Mean number of students who used clinic (N=164)		543
(range: 56-9,540)		
Percentage of male enrollees (N=124)		45%
Percentage of male users (N=157)		43%
Percentage of users, by ethnicity (N=188)		
	White	28%
	Black	44%
	Hispanic	23%
	Asian	2%
	Other	3%
Mean number of visits in the clinic (N=147)		1,847
(range: 80-8,800)		
Mean number of classroom presentations(N=139)		37
Mean number of students reached through classroom presentations (N=137)		632
Mean number of other activities *(N=87)		73
Mean number of students reached through other activities (N=79)		427

* Not included in visit data; i.e. rap groups, informal discussion

actually used the clinic during this time period. Males comprised an average of 45 percent of clinic enrollment and 43 percent of clinic users. The ethnic/racial composition of users was: 44 percent black; 28 percent white; 23 percent Hispanic; 2 percent Asian; and 3 percent other. On average, the clinic was the only source of care for 51 percent of their users.

The average number of visits to the clinic during the year was 1,847. In addition, clinic staff made an average of 37 classroom presentations reaching an average total of 632 students. Clinics sponsored an average of 73 other activities, such as rap groups and informal discussions that are not counted in visit data, which reached an average of 427 students.

An analysis by grade level indicated that the greatest average enrollment (mean=731) and the greatest number of users (mean=625) were found in junior high/middle schools. The largest average percentages of male enrollees (48 percent) and male users (50 percent) were found in elementary clinics. Examining the ethnic composition, the greatest average percentage of white users was found in the "other" category (44 percent); the greatest percentage of black users was found in elementary clinics (59 percent) and the greatest percentage of Hispanic users was found in junior high/middle schools. The highest average percentages of students having no other source of care were found in elementary (60 percent) and junior high/middle schools (59 percent).

When examined by grade level, the average number of clinic visits ranged from 1,421 in the "other" category to 2,290 in the junior high/middle schools. Clinics in senior high schools made an average of 59 presentations a year – more than fivefold that of any other grade level category. Similarly, the average number of

activities not included in visit data was 109 for senior high school clinics, more than eight times the next highest average number of 13 for junior high/middle schools. The numbers of students reached by presentations and other activities was – not unexpectedly – much greater at senior high clinics compared to other grade levels.

SLCs, with a much larger target population, enrolled an average of 1,133 students, while an average of 969 students used the clinic (Table 12). An average of 36 percent of these enrollees were male, and an average of 38 percent of users were male. The ethnic/racial composition was: 43 percent white; 41 percent black; 10 percent Hispanic; 2 percent Asian; and 4 percent other. It is estimated that the SLC was the only source of care, on average, for 56 percent of its users.

An average of 2,483 visits were made to each SLC during the 1989-90 school year. Clinic staff made an average of 18 classroom presentations during the year, reaching an average of 1,265 students, and SLCs sponsored an average of 49 activities, not covered under visit data, which reached an average of 222 students.

Half of all SBCs and over 80 percent of all SLCs track user and visit information using computerized management information systems.

Staffing Patterns

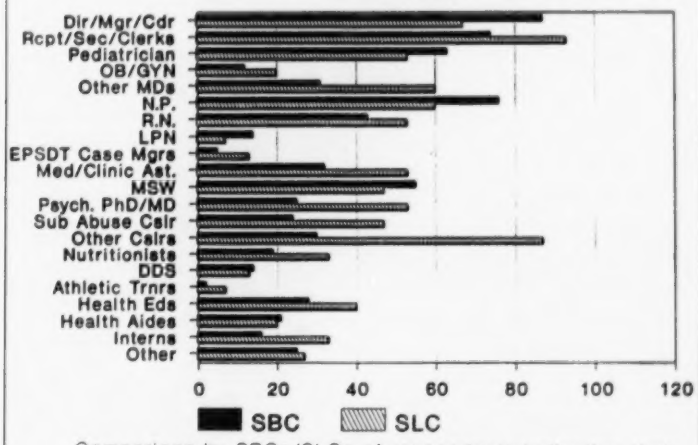
SBCs and SLCs are typically staffed with administrative, medical and counseling personnel appropriate for the services offered. Administrative staff in nearly all SBCs and SLCs responding to the survey included a director/manager/coordinator and a receptionist/secretary (Figure 4).

TABLE 12. Summary of SLC Clinic use during the 1989-1990 school year

Mean number of students enrolled in clinics (N=11)		1133
(range: 400-1,950)		
Mean number of students who used clinic (N=13)		969
(range: 217-1950)		
Percentage of male enrollees (N=10)		36%
Percentage of male users (N=12)		38%
Percentage of users, by ethnicity (N=13)		
	White	43%
	Black	41%
	Hispanic	10%
	Asian	2%
	Other	4%
Mean number of visits in the clinic (N=7)		2,483
(range: 217-5,685)		
Mean number of classroom presentations (N=11)		18
Mean number of students reached through classroom presentations(N=9)		1,265
Mean number of other activities *(N=7)		49
Mean number of students reached through other activties (N=6)		222

* Not included in visit data; i.e. rap groups, informal discussion

Figure 4: Staffing Patterns



Comparison by SBCs/SLCs of respondents indicating that they had one or more of these staff positions

Over 80 percent of clinics had a physician – most often a pediatrician working part-time. Nurse practitioners were found in nearly 70 percent of SBCs and SLCs, while other types of nurses were found in 50 percent of the clinics.

Over half of the clinics had social workers. Other types of mental health workers worked in about a quarter of the SBCs, and substance abuse and other types of counselors were found in a majority of SLCs.

Other types of health providers less commonly available in SBCs and SLCs included nutritionists, dentists, athletic trainers, health educators, health aides and interns.

In over half of all SBCs, staff participated in the following school activities: classroom presentations; parent-teacher conferences; workshops/seminars/health fairs; school administrative/teaching staff committees; and the PTA. There were few differences in the levels of involvement with regard to school grade level.

A school nurse was present in two-thirds of the schools with SBCs, and approximately one-third of these nurses worked as part of the SBC staff. Interestingly, this arrangement varied by grade level; while percentages of school nurses increased as one moved from elementary school to junior high/middle school to senior high school, the percentage of school nurses also working in SBCs decreased at the higher grade levels. Where there was a school nurse in elementary clinic schools, she/he worked in about two-thirds of the clinics, while in senior high clinics, she/he worked in about a third of the clinics.

Ninety percent of the SLCs reported that there were school nurses in their feeder schools. One quarter worked on the clinic staff.

TABLE 13. School Nurses in SBCs/SLCs: Percentages of SBCs and SLCs with various services provided by school nurse

Services Provided by School Nurse	SBC (N = 134*)	SLC (N = 8)
Delivered direct service	68[a]	38
Performed screenings	78	75
Provided follow-up services	73	75
Supervised paraprofessional staff	30[b]	13
Served as clinic manager/director	21[c]	13
Served on advisory board	54[a]	75
Participated in staff meetings	60[b]	50

*Number of respondents varied from 131 to 135
a N = 133 for this item b N = 132 for this item c N = 130 for this item

School nurses who worked as part of the SBC or SLC staff performed screenings, provided follow-up services, served on advisory boards, participated in staff meetings and delivered direct services (Table 13). In SBCs, some differences in services provided by school nurses were found by grade level. Nurses in junior high/middle schools more often delivered direct services and served as the clinic manager than in other types of schools. Smaller percentages of school nurses in senior high schools than in other schools performed screenings, provided follow-up services and supervised paraprofessional staff, but senior high school nurses served on advisory boards in greater percentages.

One interesting difference noted between SBCs and SLCs was that in 21 percent of the SBCs compared to 13 percent of the SLCs, the school nurse served as the clinic manager.

DISCUSSION

This year, the Support Center's annual survey of SBCs was sent to an expanded list of clinics which included, for the first time, school-linked clinics and clinics in elementary-only schools. These survey data allow us to examine results separately for school-based and school-linked clinics and for clinics in schools of all grade levels.

A simple, but important finding from this year's survey was that both SBCs and SLCs provided services to a wide range of grade levels and that nearly a quarter of SBCs provided services to students from more than one school. This is important to note because it demonstrates that school-based and school-linked clinics are being used to reach children at younger ages and from a broader community than is generally assumed.

Although the numbers of SLCs responding to the survey were small, their rate of response was approximately the same as that of SBCs. With few other data sources available on this service delivery model, these results permit examination of ways in which they are similar to and different from SBCs.

A common thread throughout the results is that of expanded community involvement by SLCs compared to SBCs. For example, a greater percentage of SLCs had an advisory board, and a greater percentage of these advisory boards had non-school-related membership compared to SBCs. A greater percentage of SLCs compared to SBCs had informal and formal relationships with outside community agencies; notably, greater percentages of SLCs compared to SBCs had agreements with social service departments and juvenile service agencies. Also, eligibility for clinic enrollment more often extended beyond those attending base or feeder schools for SLCs compared to SBCs; SLCs more often allowed out-of-school youth to enroll for services.

While SBCs are very accessible to students because of their location on school grounds, SLCs adjust for their increased physical distance by keeping their doors open more hours during the week and on more non-school days. Being located off school premises means they do not have to conform to a school schedule.

Results from this survey also indicate that SLCs seem to have fewer restrictions compared to SBCs with regard to provision of services. This is most noticeable in reproductive health and family planning services; while fewer than a quarter of SBCs provided contraceptives on site, nearly half of SLCs did. Undoubtedly, the location of clinics on school grounds heightens the controversy surrounding these much needed services, resulting in SLCs having a less restrictive position than SBCs. The greater percentages of SLCs providing various services without parental consent compared to SBCs is yet another indication of the more conservative policies of clinics located on school campuses.

There is a hint in these data that SLC programs may place a greater emphasis on psycho-social needs than do SBC programs. Greater percentages of SLCs provided each category of counseling and education services listed on the survey. A greater percentage of SLCs compared to SBCs had staff appropriate to provide these services.

On the other hand, SBCs provided more broad based outreach into the schools they served. SBCs averaged twice the number of classroom presentations than did SLCs and provided a greater number of "non-visit" activities. Though the content of these presentations is not known, they were educational in intent, and the difference in psycho-social emphasis may lie in the difference between individual versus group services. Further investigation is needed to test this hypothesis.

SLCs served larger numbers of clients than did SBCs, and accordingly, had larger budgets. SBCs and SLCs each received the greatest portion of their funding from state government (although they differed with regard to proportion and source). A larger percentage of funding for SBCs compared to SLCs came from private foundations. School districts were not primary sources of funding for either SBCs or SLCs, and money from patient fees and private insurance provided less than 3 percent of the total budgets for both SBCs and SLCs.

SBC funding from private foundations has declined over the past five or six years; as SBCs moved from a prototype model to a more mainstream model of delivering health services to adolescents, funding has moved from private to public sources. The small percentage of foundation funding for SLCs may reflect the fact that they began operation at a time when foundations were decreasing their contributions to adolescent health.

Although SLCs served a larger average number of users than did SBCs, they served a smaller proportion of their target population. With regard to the ethnic composition of their users, SBCs and SLCs had similar proportions of black users, but SBCs had a smaller average proportion of white users and a greater average proportion of Hispanic users than did SLCs. Interestingly, slightly under half of the users of both SBCs and SLCs had no other source of health care.

Survey data allowed an analysis of outcome variables by grade level of SBCs serving only one school. This year was the first year SBCs in elementary schools were identified in the survey. In general, clinics in elementary schools differed from clinics in junior high/ middle schools and senior high schools in predictable ways, related to the age of their clients. For example, elementary SBCs were more frequently located inside the school building rather than being in a separate building on the campus. Reproductive health and family planning services were almost nonexistent in elementary clinics except for counseling and referrals in some schools. Dental services, however, were more common in elementary school clinics than in junior high/middle or senior high schools. All elementary school clinics required parental consent for services, and with the exception of emergency care, there were no services offered by elementary clinics without parental consent. Elementary clinics served the highest average percentage of male students (50 percent) and the highest average percent of students without other sources of care (60 percent).

Senior high school clinics, too, were different in some ways from other schools. Clinics in senior high schools were most likely to have advisory boards. Senior high school clinics also provided reproductive health and family planning services in greater percentages than middle/junior high or elementary clinics, though the gap was not excessively wide between senior and middle/junior high schools. Senior high school clinics were more likely to be open longer hours than were clinics in other schools, and they were more likely to serve out-of-school youth.

CONCLUDING COMMENTS

Many state and local governments around the country – if they have not done so already – are looking at SBCs and/or SLCs as models of health care delivery for children and adolescents. The federal government, too, in its recent report by the U.S. Congress' Office of Technology Assessment has recognized SBCs and SLCs as viable means of answering a dire need.

The results presented in Update 1991 represent the accumulated experience of nearly 250 clinics and should not be overlooked as cities, counties and states begin to develop their own programs. These statistics provide information about what has been done and a glimpse of what is possible.

A comparison of SBCs and SLCs was not presented here for the purpose of determining which model is better, but rather to gain an understanding of how these two models have been implemented and how the characteristics of one or the other might better fit the particular situation of a community considering an adolescent clinic. This report presents a descriptive analysis of school-based and school-linked clinics, and in doing so raises more questions for further research.

Additional analysis of the data is needed to examine relationships among staffing, budgets and services offered. Also of interest is the possible influence sponsoring agencies might have on the mix of services offered and the level of community involvement. More research is needed to examine in more detail utilization patterns among various services and to study the effectiveness of various characteristics of SBCs and SLCs relative to quality of care, increasing utilization and promoting healthy behaviors.

When planning for the future of today's and tomorrow's youth, communities, school districts and health care providers should assess the possibility of providing health care for youth from elementary school through senior high school. Future longitudinal studies could then follow a cohort of students throughout their school years to assess utilization patterns and to determine the impact of the clinic on disease prevention and health promotion.

As the following highlight on Michigan's Teen Health Centers emphasizes, communities can develop health care models to fit community specific needs. Working together is the way to promote health and prevent disease among youth and adolescents.

MICHIGAN'S EXPERIENCE IN SCHOOL AND COMMUNITY-BASED TEEN HEALTH CENTERS

The Michigan Department of Health (MDPH), committed to providing teens access to comprehensive health services, has designated funds to support 19 teen health centers during 1991. These centers provide professional, affordable and convenient primary and preventative health care services to teens. In 1990, over 14,000 teens in rural and urban areas were served.*

Michigan's teen health centers ensure access to services for adolescents by seeking local input and involvement in program design and by emphasizing flexibility in models of service provision. This process grew out of the recommendations of a 54-member Advisory Task Force report, published in January, 1987, which stressed the community's role in the establishment of teen health centers. Groups interested in receiving funding from MDPH must submit a proposal which includes both a plan for a local advisory committee with broad representation and the results of a local adolescent health needs assessment. If funding is granted, each community advisory committee determines the center's location, service package, and eligibility policy. Regardless of the center's eventual location, school administration and board members serving these communities then forge links between the schools and the center.

Most community-based centers are located within two blocks of a school and include evening or weekend hours to provide easy access for teens. All of the teen health centers provide a range of services designed to address the medical and health care needs of adolescents. These include general medical services, chronic disease management, substance abuse counseling and treatment, mental health services, immunizations, STD diagnosis and treatment, and health promotion and risk reduction services. This model leaves the provision of family planning services to the discretion of each center. All of the teen health centers

Fifteen of MDPH's clinics responded to the survey of school-based and school-linked clinics and indicated that they provided the following services during the 1989-90 school year: provide referrals; a majority of the community-based centers also make family planning services available. MDPH requires that all teen health centers provide Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) services. The centers do not provide abortion services, counseling or referral.

The teen health centers employ health care professionals (nurse practitioners and/or physicians) with particular training and interest in adolescent health care. All teen health centers work closely with the local medical and health communities, including local health departments, to assure that services are coordinated and that referral and follow-up arrangements are made.

Of MDPH's 19 teen health centers, eight are located in schools and three are on school property. The remaining eight are community-based. Each model has distinct advantages, but the most important factor in a program's success is not the model but the level of community support and participation.

Support from the state was evident from the data which indicated that a large percentage of clinic funding during the 1989-90 school year was state health money (44 percent) compared to the overall SBC sample (25 percent) and SLC sample (36 percent):

On average, in the 1989-1990 fiscal year MDPH contributed $99,639 per clinic versus the amount contributed by state health departments overall, which was $53,639. In addition, MDPH clinics also received $40,720 on average in in-kind contributions as compared to $37,888 for clinics overall, which reflects the community interest and support in Michigan.

MICHIGAN A. Medical services in Michigan Centers

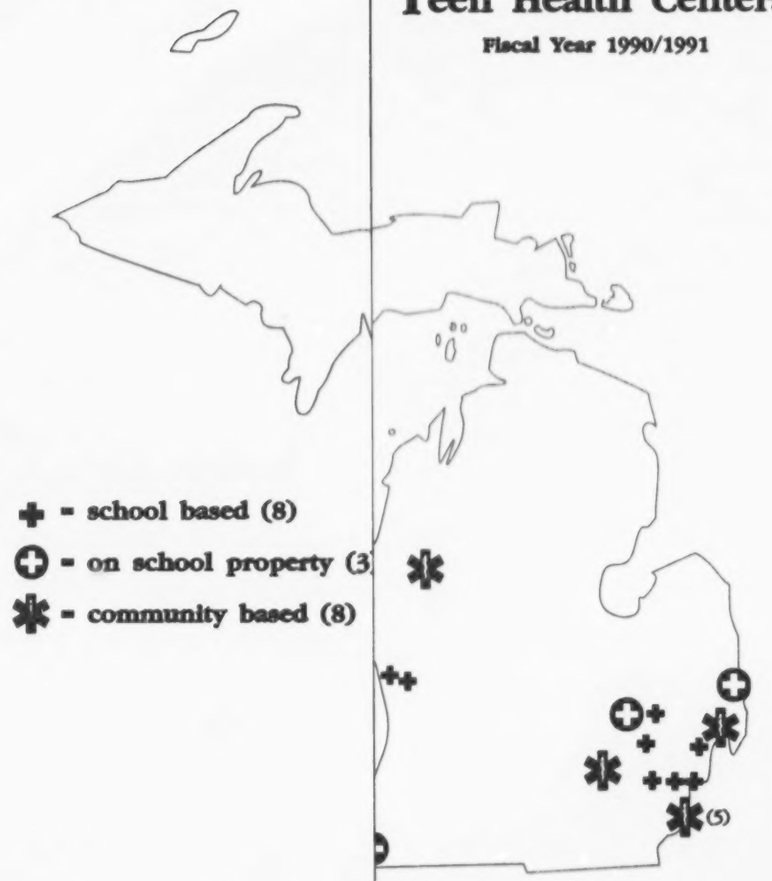
Services	% of Clinics Providing Service (N = 15)
General primary care	100
Routine/sports physicals	100
Diagnosis/treatment of minor injuries	100
Laboratory tests	100
Dagnosis/treatment of STDS	100
Immunizations	100 a
Medications prescribed	100
Assessment/referrals to community health care system	100
Assessment/referrals to private local physicians	100
Chronic illness management	93
Gynecological exams	93
Medications dispensed	93 a
Referral for prenatal care	93
Pregnancy tests	87
EPSDT screenings*	53
Prenatal care on site	20
HIV testing	13
Pediatric care of infants of adolescents	13
Dental services	0

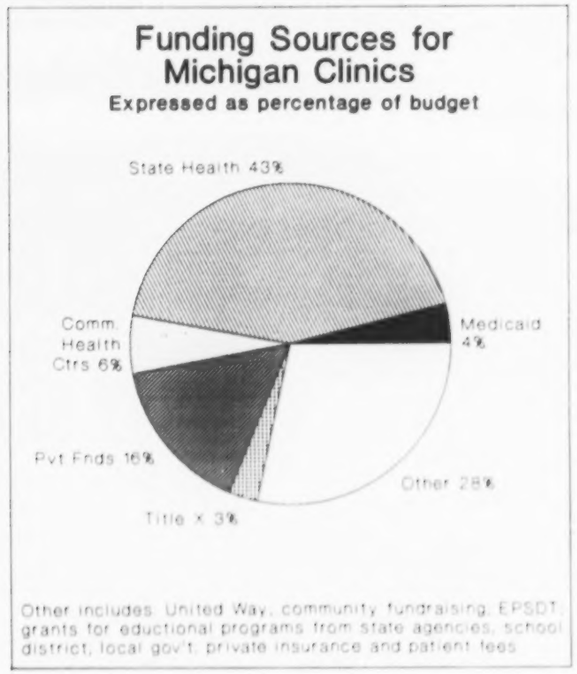
a N = 14 for this item

* All Michigan clinics are required to provide EPSDT screenings and do. The reason that this figure is not 100% is because the remaining clinics have EPSDT services provided through cooperative agreements with their local health departments.

Teen Health Centers

Fiscal Year 1990/1991




Funding Sources for Michigan Clinics
Expressed as percentage of budget
State Health 43%
Medicaid 4%
Comm. Health Ctrs 6%
Pvt Fnds 16%
Other 28%
Title X 3%
Other includes: United Way, community fundraising, EPSDT, grants for eductional programs from state agencies, school district, local gov't, private insurance and patient fees

By Kathy Miller, Adolescent Health Consultant, Michigan Department of Public Health

**Michigan's appropriation for adolescent health totals $2,142,300 in the current fiscal year*

MICHIGAN B. Funding Sources

Funding Source	Mean Dollars	N
EPSDT	3,579	6
Medicaid	8,689	7
Title X	6,667	6
School district	1,471	7
Community health centers	13,063	7
State health agency	99,639	14
City/county government	4,123	6
Private foundations	36,556	9
Private insurance reimbursement	2,305	7
Patient fees	3,487	8
Other*	46,893	6
Total	164,143	14

* Other funding sources included: United Way, community fundraising, grants for educational programs from state agencies, and service organization donations.

the
Center for
Population
Options